ABSTRACT

A cryocooler cold end assembly is disclosed. The assembly includes a unitary external, outer housing. By constructing the housing from a single unitary metal shell, part count is reduced from prior art assemblies. Additionally, all brazing requirements previously necessary to secure and seal the components are eliminated. Further, due to one or more machining steps subsequent to manufacturing/forming the external sealed housing, the tolerances are improved. This allows for shrink to fit assembly of several components and also results in improved straight-line accuracy between the piston bore and the displacer cylinder. Due to this latter improvement, the need for a displacer liner is eliminated.